

ABSTRACT

An aircraft fire-extinguishing system provides automatic fire prevention and/or suppression simultaneously in fuel tanks, cargo compartments and, when needed, in cabin using injection of hypoxic (oxygen-depleted) air produced onboard in an air-separation device utilizing the flow and pressure of the bleed air. The same air-separation device allows supplying passengers and crew with unlimited amounts of oxygen for as long as needed. New methods of a rapid fire suppression utilizing the propulsion of water mist or fire-extinguishing foam by hypoxic air are presented. The combination of water mist or foam with hypoxic air allows to present two innovative fire-extinguishing compositions.